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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,748	02/27/2004	Sheng-Shiou Yeh		6100

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EXAMINER

NGUYEN, THANH NHAN P

ART UNIT PAPER NUMBER

2871

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/788,748	<b>Applicant(s)</b> YEH ET AL.	
	<b>Examiner</b> (Nancy) Thanh-Nhan P. Nguyen	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 8, 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/27/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-3, 7, and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Moon U.S. Patent Application Publication No. 2001/0026335.**

Referring to claims 1-2, Moon discloses a color filter for use in a liquid crystal display device, comprising: a substrate (500) having two surfaces; a polarizer matrix (152) having a first polarization direction (reflects the left-handed circularly polarized light) formed on one surface of said substrate defining a plurality of openings; and a color filter (200) layer formed on said substrate in the openings of said polarizer matrix; wherein said polarizer matrix is made of a thin crystal film material (cholesteric liquid crystal CLC), [see figs. 4-5; par. 0043].

Little Remark: In Moon reference, reference 152 is referred as black matrix. However, since black matrix 152 is made of the cholesteric liquid crystal, which reflects the left-handed circularly polarized light, and it transmits the right-handed circularly polarized light, [see par. 0043], it would function just as a polarizer, particularly, circular polarizer. Therefore, it meets the limitation in the claims.

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Claim 3 is a product-process-claim. According to MPEP 2113, in this case, examiner wouldn't give any weight to process of making the product. Therefore, claim 3 is met the discussion regarding claim 1 rejection above.

Referring to claim 7, Moon discloses the color filter further comprising a polarizer film (150) having a second polarization direction (reflects the right-handed circularly polarized light) formed on another surface of said substrate, [see figs. 4-5; par. 0042].

Referring to claims 13-14, Moon discloses a color filter for use in a liquid crystal display device, comprising: a substrate (500) having opposite first and second surfaces; polarizer areas having a first polarization direction (reflects the left-handed circularly polarized light) and formed on the first surface of said substrate and defining a plurality of openings therebetween; a color filter layer (200) formed on the first surface of said substrate at least in the openings of said polarizer areas; wherein a polarizer film having a second polarization direction (reflects the right-handed circularly polarized light), is formed on the second surface of the substrate, [see figs. 4-5; pars. 0042-0043].

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

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be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moon in view of Makino U.S. Patent No. 6,259,505.**

Referring to claim 4, Moon lacks disclosure of a protective layer covering said polarizer matrix and said color filter layer.

It is conventional to have a protective layer covering the polarizer matrix and color filter layer, as claimed, for the benefit of flattening the color filter surface, and it is evidenced by Makino, [see fig. 1; col. 1, lines 31-35]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a protective layer covering the polarizer matrix and color filter layer, as claimed, for the benefit of flattening the color filter surface.

**Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon in view of Makino as discussed above and further in view of Mun et al U.S. Patent Application Publication No. 2002/0033927.**

Referring to claims 5-6, even though Moon lacks disclosure of the color filter further comprising a conductive layer covering the protective layer, wherein said conductive layer is made of a transparent conductive material such as indium-tin-oxide, it is very well known to have the conductive layer made of indium-tin-oxide covering the protective layer for being applied voltage to drive liquid crystal layer in the panel, and it is evidenced at least by Mun, [see fig. 1; par. 0096]. Therefore, at the time the invention was made, it would have been

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obvious to a person of ordinary skill in the art to have the conductive layer made of indium-tin-oxide covering the protective layer for being applied voltage to drive liquid crystal layer in the panel.

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moon in view of Chen et al U.S. Patent No. 5,340,619.**

Referring to claim 9, Moon discloses a method for manufacturing a color filter comprising the steps of providing a substrate (500) having a first surface and a second surface; forming a polarizer matrix (152) on the first surface of the substrate and defining a plurality of openings.

Moon lacks disclosure of the step of curing the substrate, on which a polarizer matrix has been formed, in an oven.

Curing the substrate in an oven is a conventional step in manufacturing liquid crystal display device, as evidenced by Chen et al, [see col. 8, lines 61-68; col. 9, lines 1-2], and therefore has the benefits associated with being conventional, such as the benefit of being available and the benefit of being suitable for the intended purpose. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the step of curing the substrate, on which a polarizer matrix has been formed, in an oven for the benefit of being available and the benefit of being suitable for the intended purpose.

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**Claims 10-11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moon in view of Chen et al as discussed above, and further in view of Boone U.S. Patent No. 2,699,706.**

Referring to claim 10, Moon lacks disclosure of the step of applying a stress force, or gravitational or electromagnetic fields on the polarizer matrix so as to obtain a first polarization direction.

Boone discloses applications of mechanical stress or other force such as that involved in the rubbing of a slightly softened polarizing layer to pre-determinedly orient surface portions thereof, [see col. 4, lines 34-37]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to applying a stress force to obtaining the polarization direction.

Claim 11 is met the discussion regarding claims 9, 1, 4, 5, and 7 rejection above.

**Allowable Subject Matter**

Claims 8, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter. None of prior art taught or disclosed a color filter for use in a liquid crystal display device, comprising: a substrate having two surfaces; a polarizer matrix having a first polarization direction formed on one surface of said

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substrate defining a plurality of openings; a color filter layer formed on said substrate in the openings of said polarizer matrix; a polarizer film having a second polarization direction formed on another surface of said substrate; wherein the second polarization direction of said polarizer is perpendicular to the first polarization direction of said polarizer matrix.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moon U.S. Patent Application Publication No. 2001/0026335 discloses a color filter for use in a liquid crystal display device, comprising a polarizer matrix having a first polarization direction (reflects the left-handed circularly polarized light) formed on one surface of said substrate defining a plurality of openings; and a color filter layer formed on said substrate in the openings of said polarizer matrix; a polarizer film having a second polarization direction (reflects the right-handed circularly polarized light) formed on another surface of substrate.

Makino U.S. Patent No. 6,259,505 discloses a protective layer covering said polarizer matrix and said color filter layer.

Mun et al U.S. Patent Application Publication No. 2002/0033927 discloses a conductive layer made of indium tin oxide covering the protective layer.

Chen et al U.S. Patent No. 5,340,619 discloses the step of curing the substrate in an oven.

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Boone U.S. Patent No. 2,699,706 discloses applying a stress force to obtain the polarization direction.

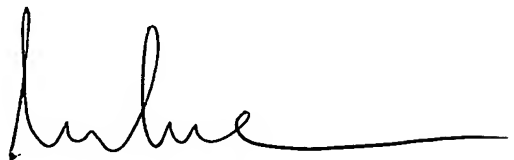
Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 27, 2005

JN

  
**DUNG T. NGUYEN**  
**PRIMARY EXAMINER**